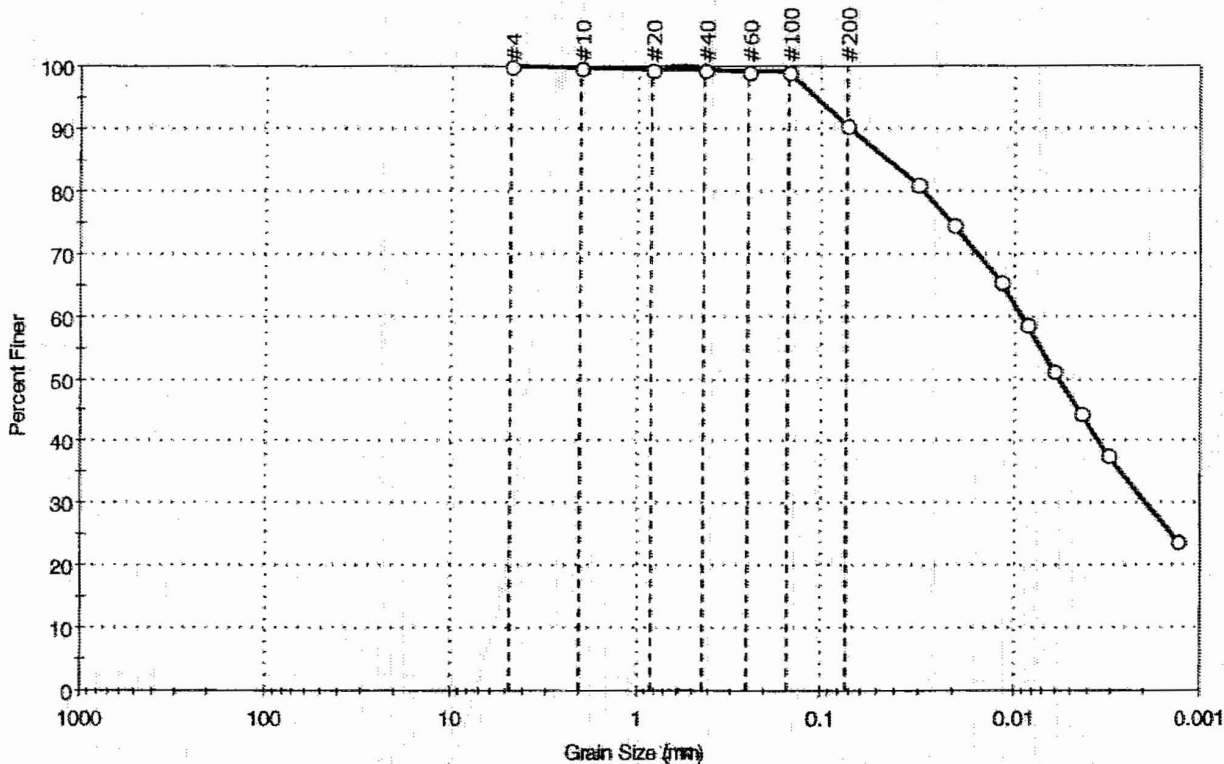


| | |
|---|----------------------|
| Client: Schnabel Engineering, Inc. | Project No: GTX-6880 |
| Project: Subsurface Investigation Calvert Cliffs Nuclear PP | Tested By: n/a |
| Location: Calvert County, MD | Checked By: mcm |
| Boring ID: B-423 | Sample Type: tube |
| Sample ID: S-41 | Test Date: 10/17/06 |
| Depth: 188.5-189.0 ft | Test ID: 100192 |
| Test Comment: --- | |
| Sample Description: Moist olive gray sandy clay | |
| Sample Comment: --- | |

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



| | | | |
|----------|----------|--------|--------------------|
| % Cobble | % Gravel | % Sand | % Silt & Clay Size |
| --- | 0.0 | 9.4 | 90.6 |

| Sieve Name | Sieve Size, mm | Percent Finer | Spec. Percent | Complies |
|------------|--------------------|---------------|---------------|----------|
| #4 | 4.75 | 100 | | |
| #10 | 2.00 | 100 | | |
| #20 | 0.84 | 99 | | |
| #40 | 0.42 | 99 | | |
| #60 | 0.25 | 99 | | |
| #100 | 0.15 | 99 | | |
| #200 | 0.074 | 91 | | |
| --- | Particle Size (mm) | Percent Finer | Spec. Percent | Complies |
| --- | 0.0314 | 81 | | |
| --- | 0.0201 | 75 | | |
| --- | 0.0118 | 65 | | |
| --- | 0.0085 | 59 | | |
| --- | 0.0060 | 51 | | |
| --- | 0.0043 | 45 | | |
| --- | 0.0031 | 38 | | |
| --- | 0.0013 | 24 | | |

Coefficients

| | |
|-----------------------------|-----------------------------|
| D ₈₅ = 0.0443 mm | D ₃₀ = 0.0019 mm |
| D ₆₀ = 0.0090 mm | D ₁₅ = N/A |
| D ₅₀ = 0.0057 mm | D ₁₀ = N/A |
| C _u = N/A | C _c = N/A |

Classification

ASTM elastic silt (MH)

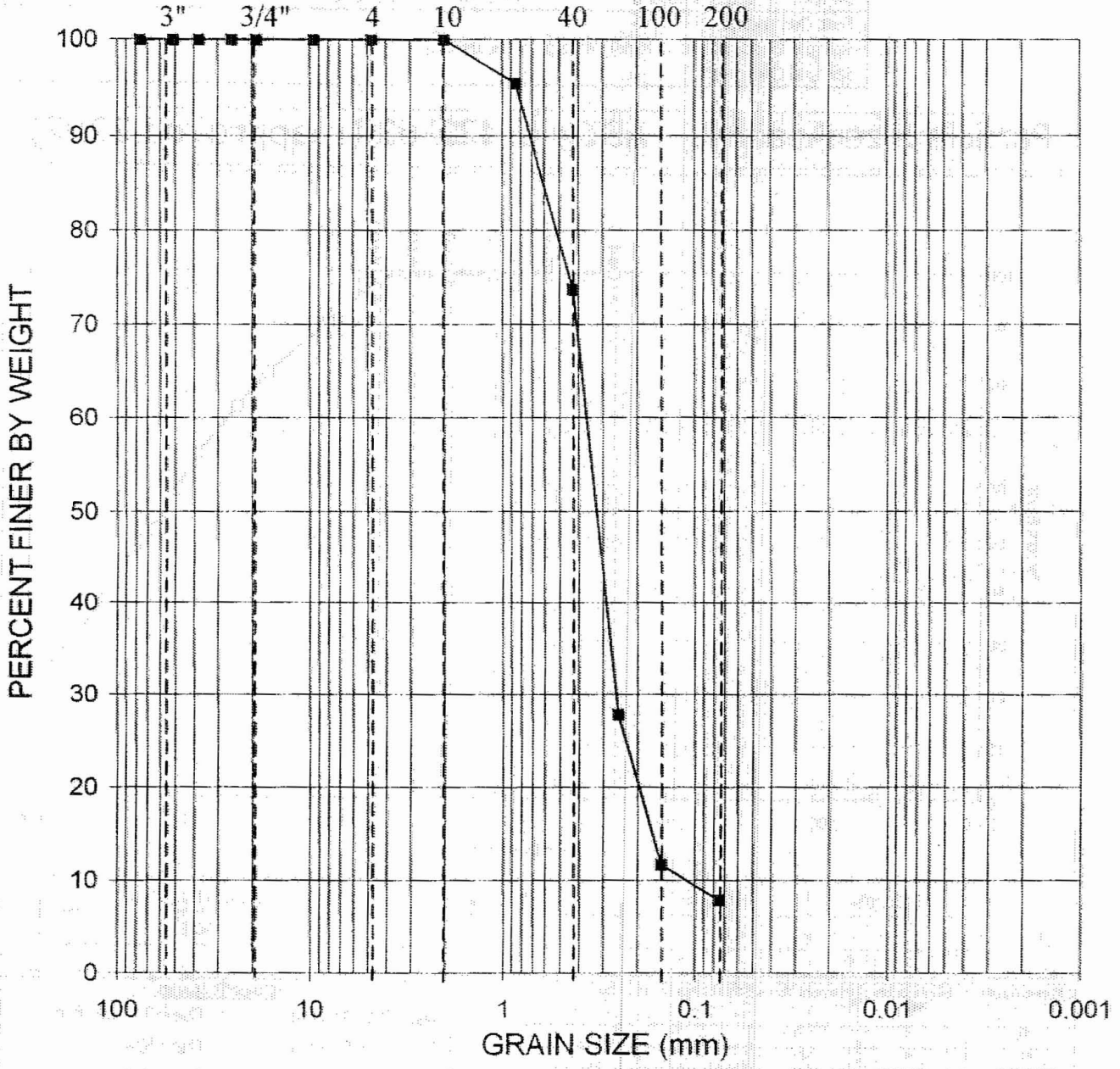
AASHTO Clayey Soils (A-7-5 (59))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

U.S. Standard Sieve Nos.

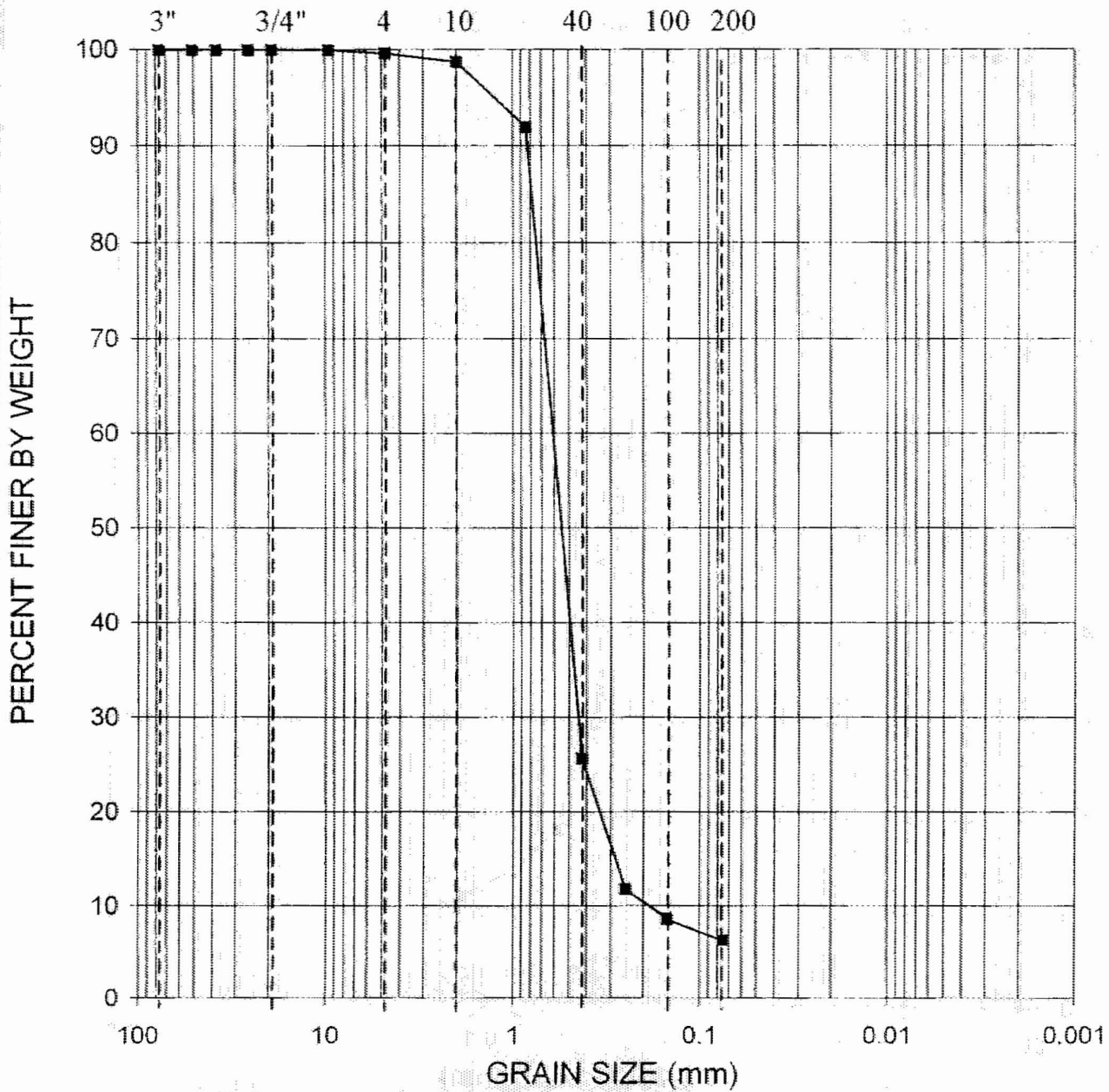


GRAVEL SAND SILT OR CLAY

GRADATION CURVE
ASTM D422

| | | | | | | | |
|------------|------------|---|--------|--------------------------|----|-----------------|--|
| Project: | | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | | Contract No. 06120048.00 | | Date: 9/19/2006 | |
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI | | |
| B-425 | 3.5 | Poorly Graded SAND with silt, brown | SP-SM | | | | |


U.S. Standard Sieve Nos.



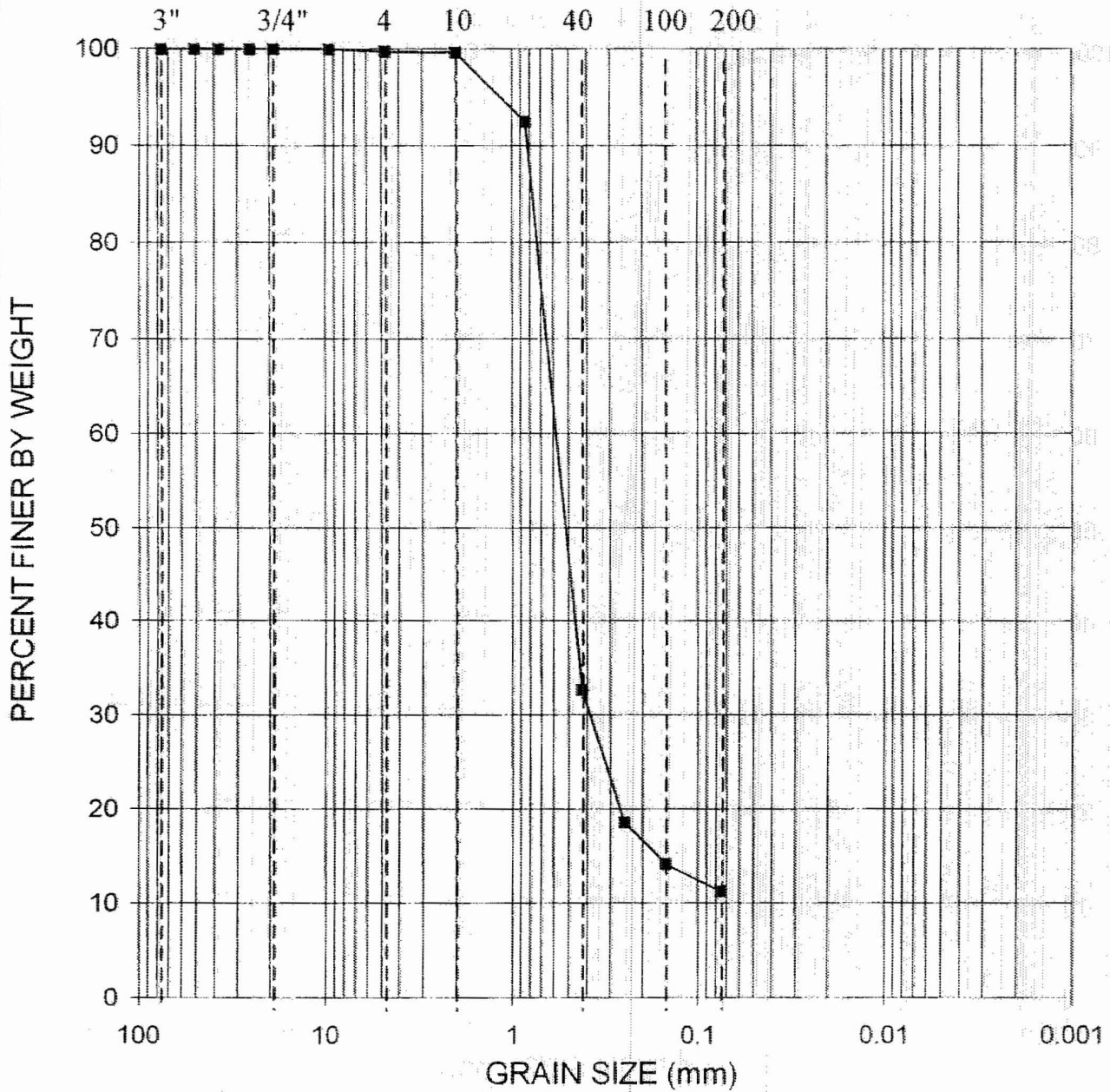
GRAVEL SAND SILT OR CLAY

GRADATION CURVE

ASTM D422

| | | | | | | | |
|------------|---|--------------------------------------|--------|---------------|-------------|---|-----------|
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | | | Contract No.: | 06120048.00 | Date: | 9/18/2006 |
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |  | |
| B-425 | 13.5 | Poorly Graded SAND, with silt, brown | SP-SM | | | | |

U.S. Standard Sieve Nos.



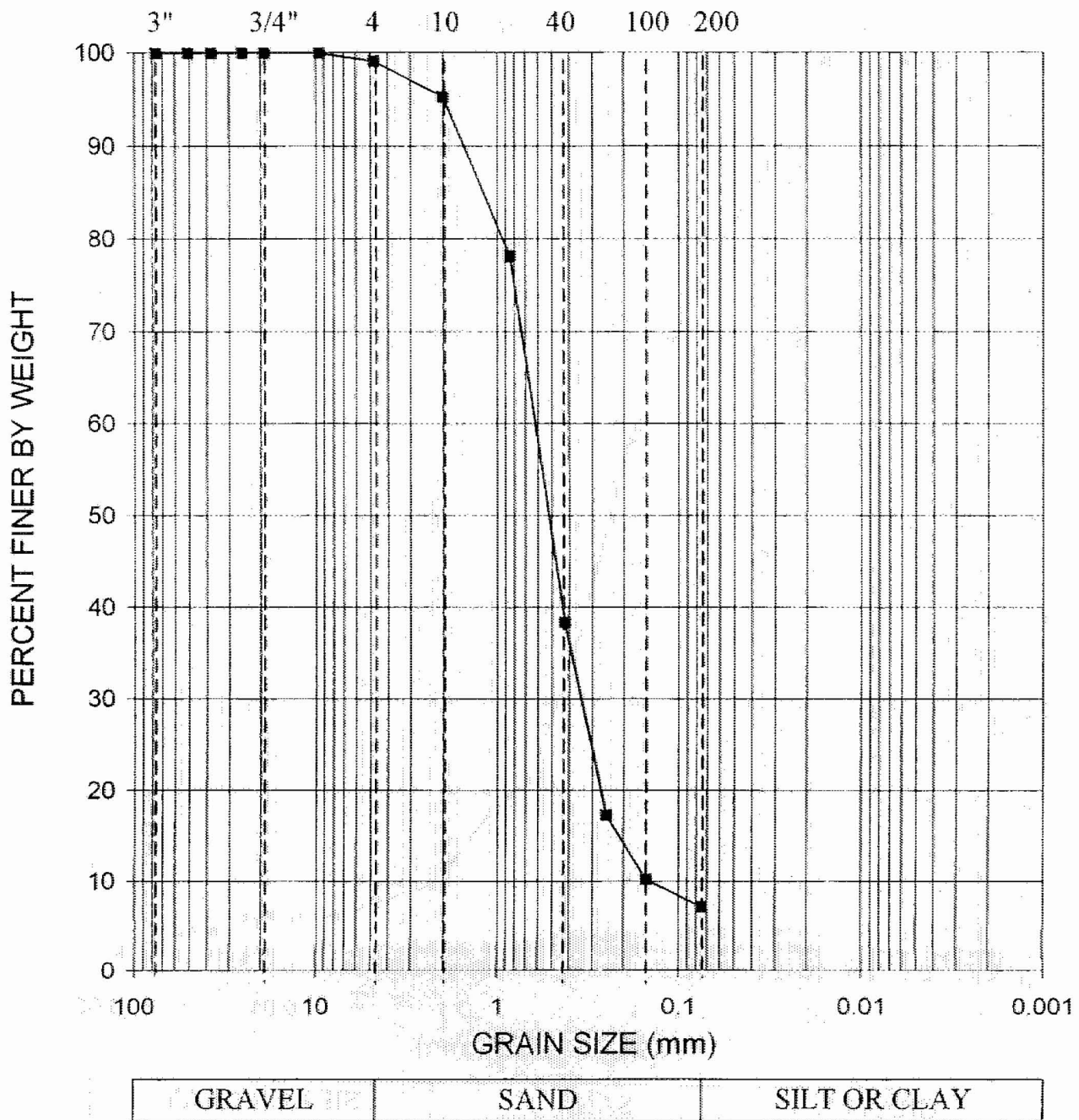
| | | |
|--------|------|--------------|
| GRAVEL | SAND | SILT OR CLAY |
|--------|------|--------------|

GRADATION CURVE

ASTM D422

| | | | | | | | |
|------------|---|--------------------------------------|--------|---------------|-------------|-------|-----------|
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | | | Contract No.: | 06120048.00 | Date: | 9/18/2006 |
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI | | |
| B-425 | 30.0 | Poorly Graded SAND, with silt, brown | SP-SM | | | | |

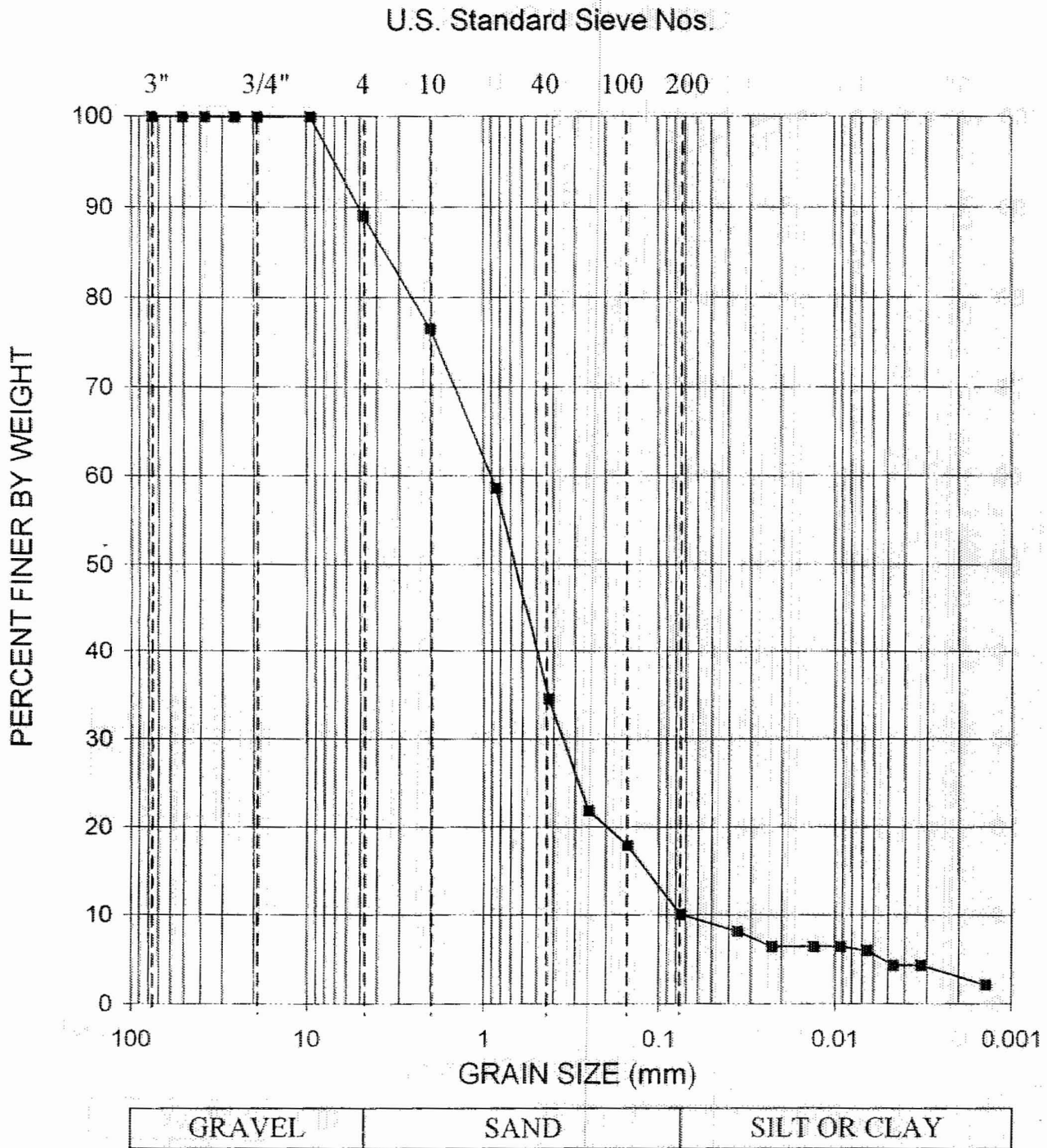
U.S. Standard Sieve Nos.



GRADATION CURVE

ASTM D422

| | | | | | | |
|------------|---|--------------------------------------|--------------|-------------|------|-----------|
| Project | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | | Contract No. | 06120048.00 | Date | 9/15/2006 |
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI | |
| B-425 | 40.0 | Poorly Graded SAND, with silt, brown | SP-SM | | | |

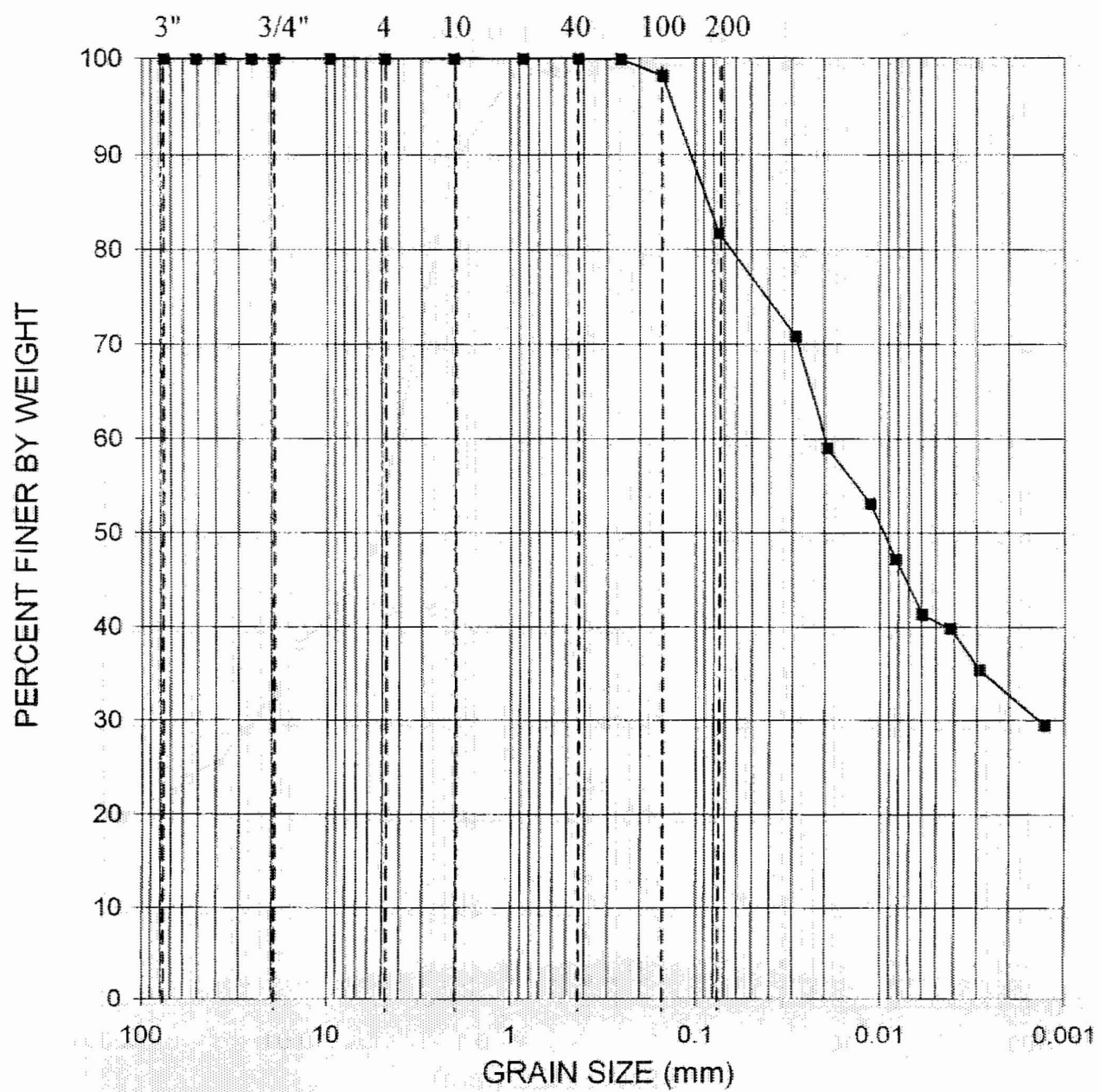


GRADATION CURVE

ASTM D422


| | | | | | | | |
|------------|---|---|-------|---------------|-------------|-------|-----------|
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | | | Contract No.: | 06120048.00 | Date: | 9/22/2006 |
| Boring No. | Depth (ft) | Sample Description | Class | LL | PI | | |
| B-425 | 50.0 | Well Graded SAND, with silt, trace gravel, brown | SW-SM | 28 | 11 | | |

U.S. Standard Sieve Nos.

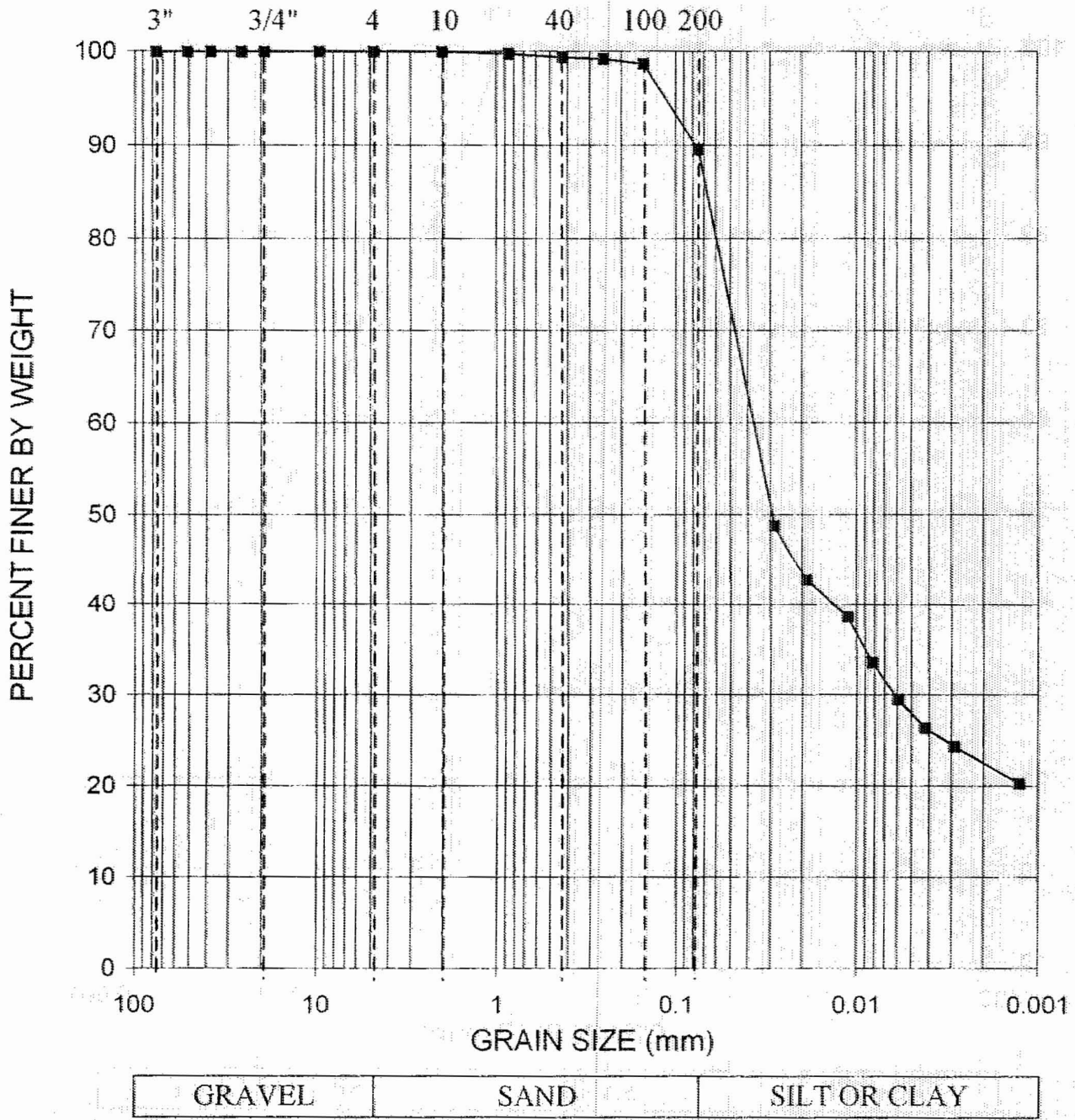


GRAVEL SAND SILT OR CLAY

GRADATION CURVE
ASTM D422

| | | | | | | | |
|------------|---|---------------------------|--------|--------------|-------------|---|-----------|
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | | | Contract No. | 06120048.00 | Date: | 9/20/2006 |
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |  | |
| B-425 | 57.0 | FAT CLAY, with sand, gray | CH | 55 | 30 | | |

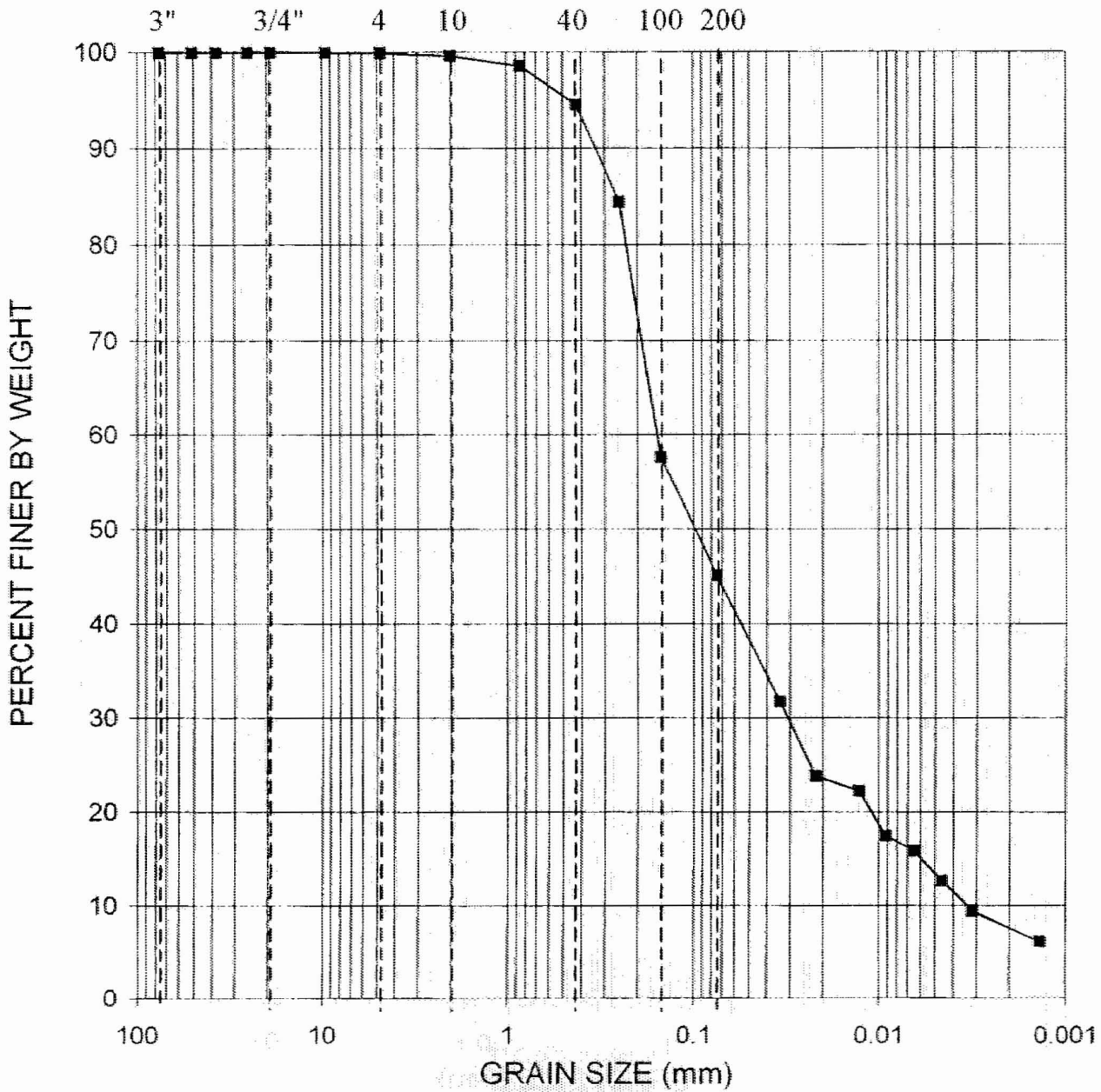
U.S. Standard Sieve Nos.



GRADATION CURVE
ASTM D422

| | | | | | | | |
|------------|---|---------------------------------|--------|---------------|-------------|-------|-----------|
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | | | Contract No.: | 06120048.00 | Date: | 9/20/2006 |
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI | | |
| B-425 | 65.0 | FAT CLAY, trace sand, dark gray | CH | 69 | 41 | | |


U.S. Standard Sieve Nos.



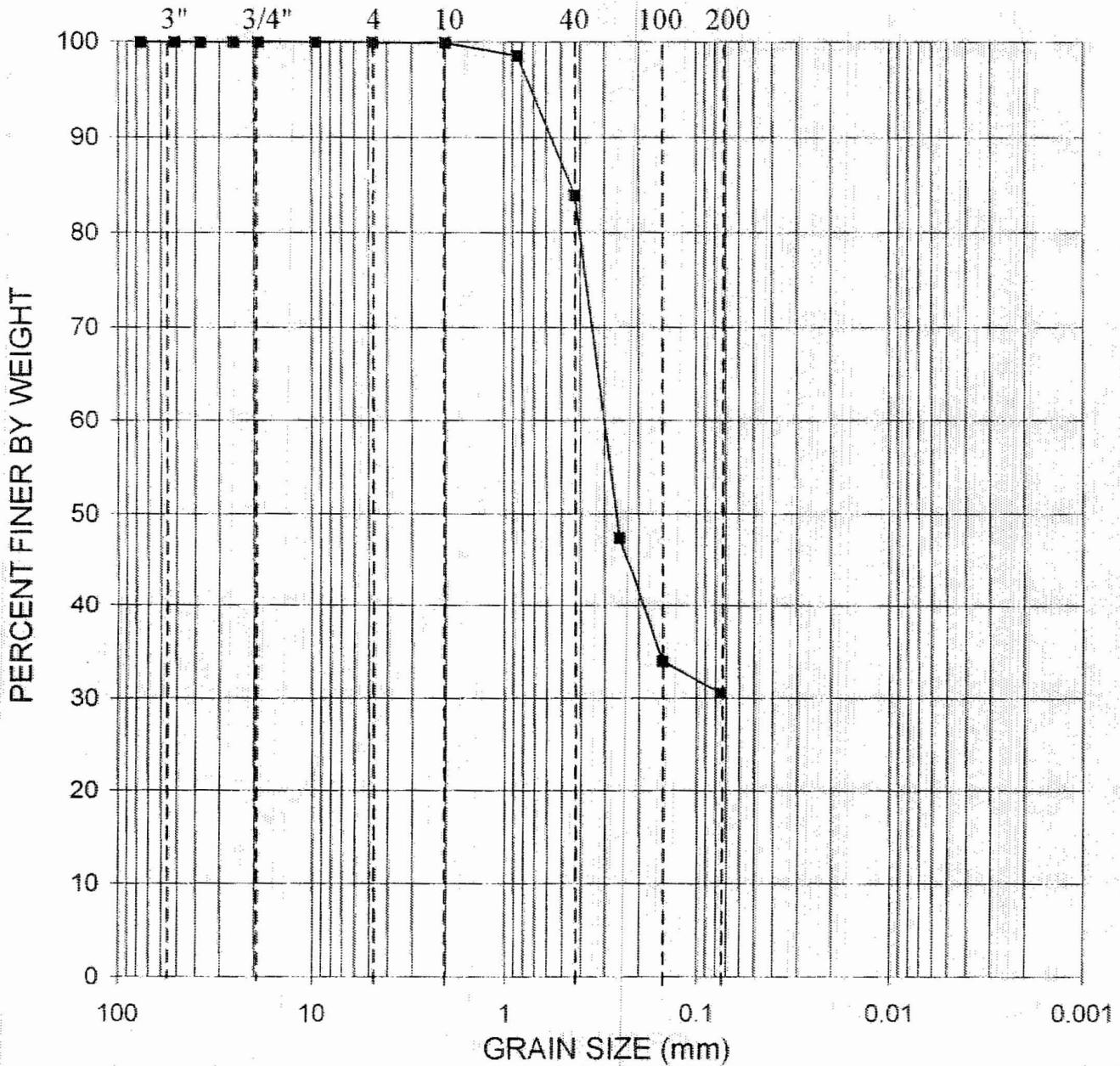
| | | |
|--------|------|--------------|
| GRAVEL | SAND | SILT OR CLAY |
|--------|------|--------------|

GRADATION CURVE

ASTM D422

| | | | | | | | |
|------------|---|------------------------|--------|---------------|-------------|---|-----------|
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | | | Contract No.: | 06120048.00 | Date: | 9/19/2006 |
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |  | |
| B-425 | 75.0 | Clayey SAND, dark gray | SC | 41 | 21 | | |

U.S. Standard Sieve Nos.



| | | |
|--------|------|--------------|
| GRAVEL | SAND | SILT OR CLAY |
|--------|------|--------------|

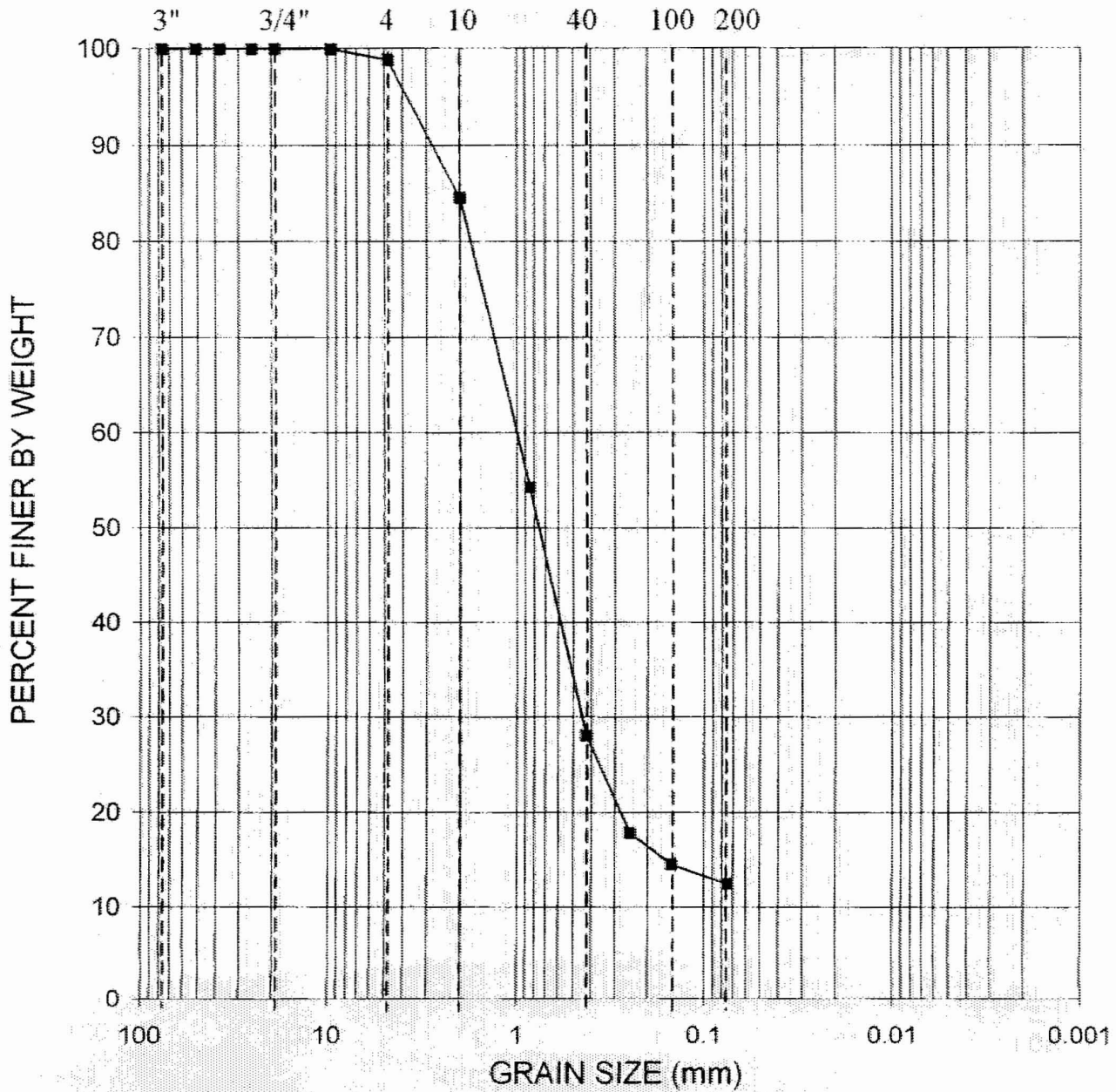
GRADATION CURVE

ASTM D422

| | | | |
|------------|---|--------------------------|-----------------|
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | Contract No. 06120048.00 | Date: 9/15/2006 |
| Boring No. | Depth (ft) | Sample Description | Class. LL PI |
| B-427 | 2.5 | Silty SAND, dark brown | SM |



U.S. Standard Sieve Nos.



| | | |
|--------|------|--------------|
| GRAVEL | SAND | SILT OR CLAY |
|--------|------|--------------|

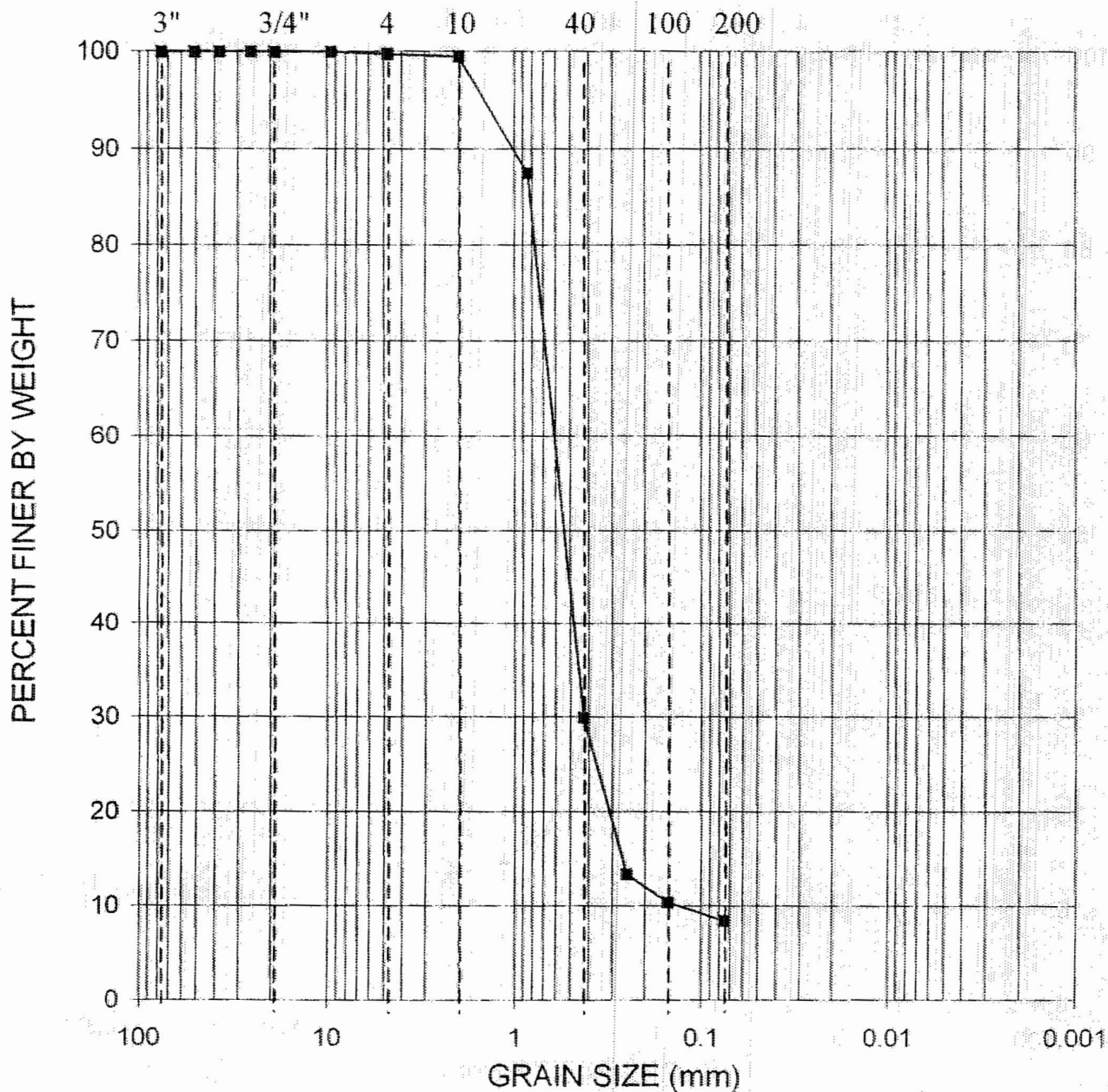
GRADATION CURVE

ASTM D422

| | | | | | |
|------------|---|---------------------------------------|--------|--------------------------|----------------|
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | | | Contract No. 06120048.00 | Date 9/18/2006 |
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
| B-427 | 18.5 | Silty SAND, trace gravel, light brown | SM | | |



U.S. Standard Sieve Nos.



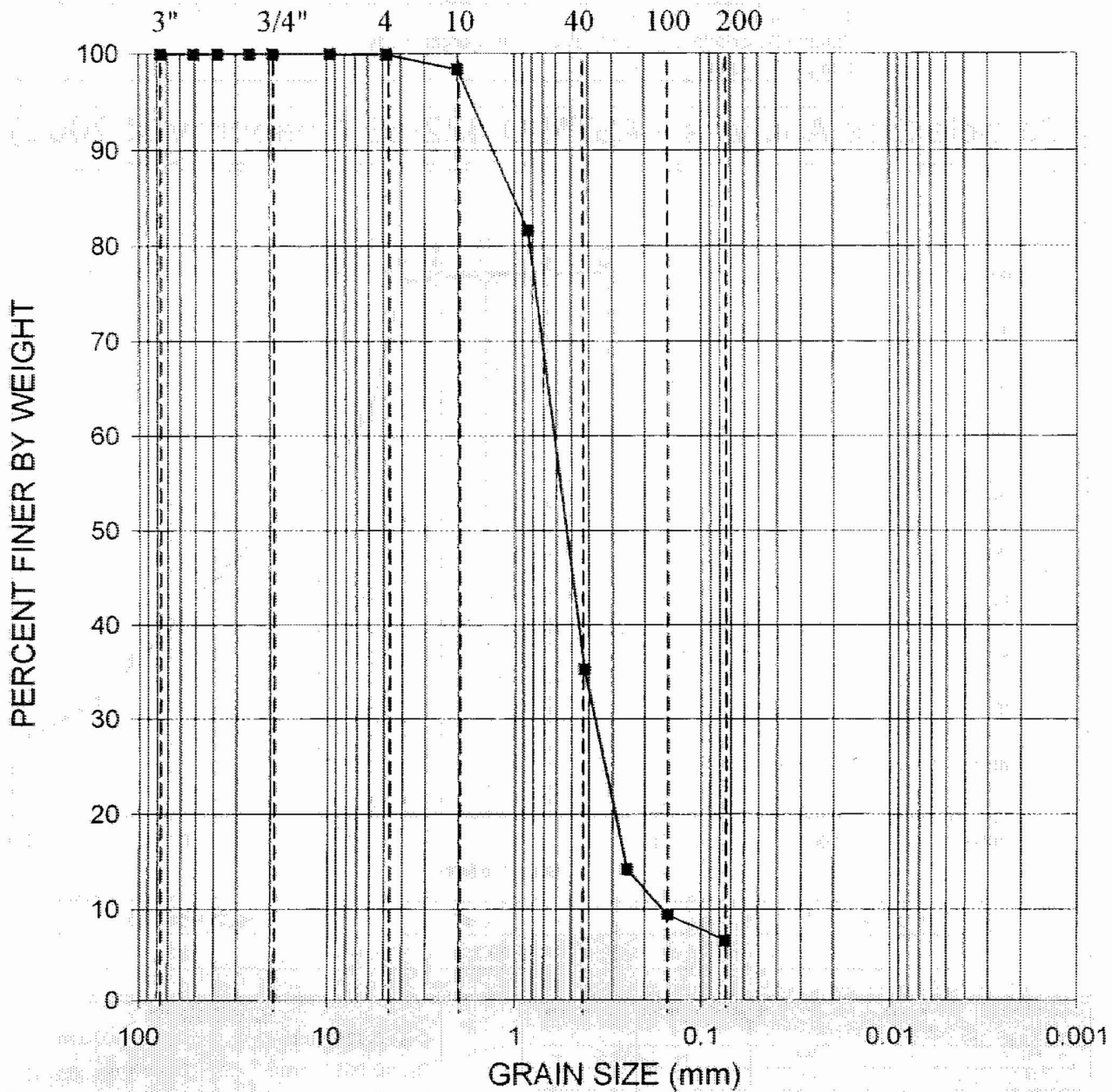
| | | |
|--------|------|--------------|
| GRAVEL | SAND | SILT OR CLAY |
|--------|------|--------------|

GRADATION CURVE
ASTM D422

| | | | | | |
|------------|---|--|---------------------------|-----------------|----|
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | | Contract No.: 06120048.00 | Date: 9/15/2006 | |
| Boring No. | Depth (ft) | Sample Description | Class | LL | PI |
| B-427 | 28.5 | Poorly Graded SAND, with silt, light brown | SP-SM | | |



U.S. Standard Sieve Nos.



| | | |
|--------|------|--------------|
| GRAVEL | SAND | SILT OR CLAY |
|--------|------|--------------|

GRADATION CURVE
ASTM D422

| | | | | | |
|------------|---|--------------------------------------|-------------|-------|-----------|
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland | Contract No.: | 06120048.00 | Date: | 9/18/2006 |
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
| B-427 | 48.5 | Poorly Graded SAND, with silt, brown | SP-SM | | |

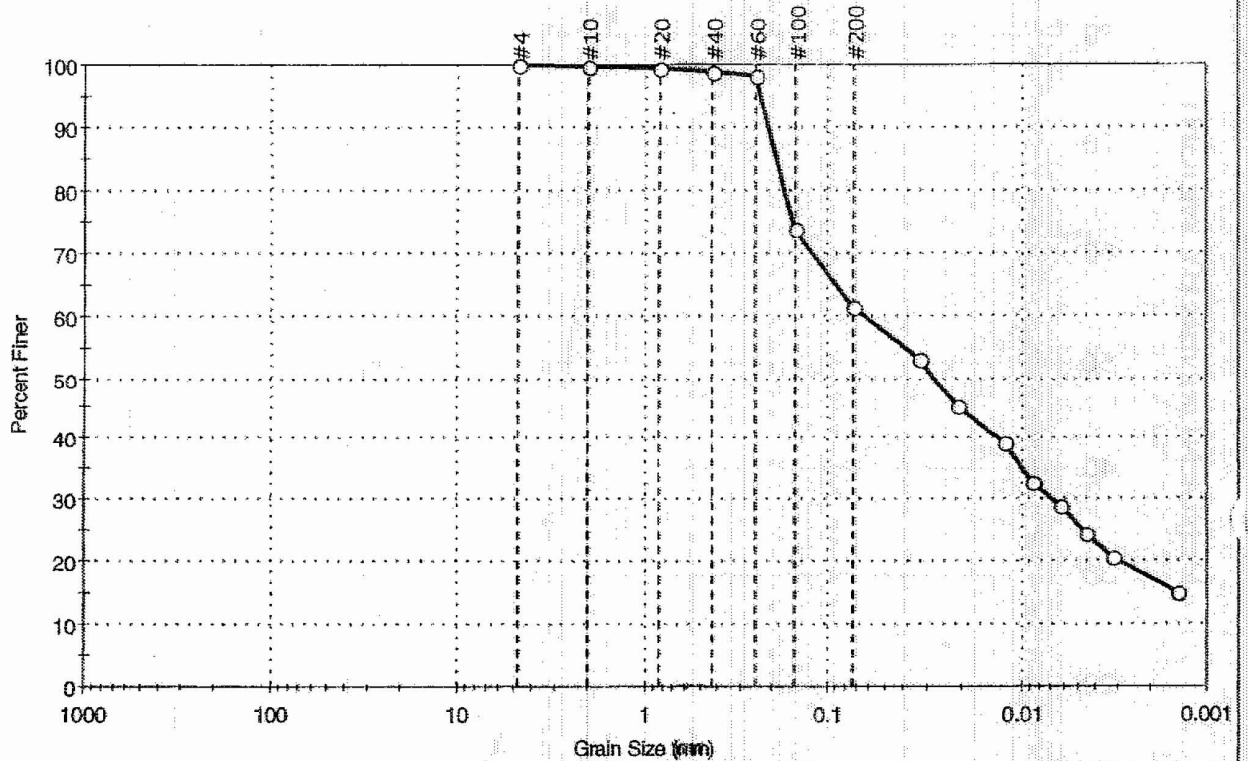


GeoTesting express

a subsidiary of Geocomp Corporation

| | | | |
|--|---|------------------------------|----------------------|
| Client: Schnabel Engineering, Inc. | Project: Subsurface Investigation Calvert Cliffs Nuclear PP | Location: Calvert County, MD | Project No: GTX-6880 |
| Boring ID: B-427 | Sample Type: tube | Tested By: sam | Checked By: mcm |
| Sample ID: S-16 | Test Date: 10/11/06 | Test Id: 98601 | |
| Depth: 63.5-65.5 ft | | | |
| Test Comment: --- | | | |
| Sample Description: Moist, black, sandy organic clay | | | |
| Sample Comment: --- | | | |

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



| | | | |
|----------|----------|--------|--------------------|
| % Cobble | % Gravel | % Sand | % Silt & Clay Size |
| — | 0.0 | 38.7 | 61.3 |

| Sieve Name | Sieve Size, mm | Percent Finer | Spec. Percent | Complies |
|------------|--------------------|---------------|---------------|----------|
| #4 | 4.75 | 100 | | |
| #10 | 2.00 | 100 | | |
| #20 | 0.84 | 99 | | |
| #40 | 0.42 | 99 | | |
| #60 | 0.25 | 98 | | |
| #100 | 0.15 | 74 | | |
| #200 | 0.074 | 61 | | |
| --- | Particle Size (mm) | Percent Finer | Spec. Percent | Complies |
| --- | 0.0335 | 53 | | |
| --- | 0.0212 | 45 | | |
| --- | 0.0123 | 39 | | |
| --- | 0.0088 | 33 | | |
| --- | 0.0063 | 29 | | |
| --- | 0.0045 | 24 | | |
| --- | 0.0032 | 21 | | |
| --- | 0.0014 | 15 | | |

| Coefficients | |
|-----------------------------|-----------------------------|
| D ₈₅ = 0.1896 mm | D ₃₀ = 0.0070 mm |
| D ₆₀ = 0.0654 mm | D ₁₅ = N/A |
| D ₅₀ = 0.0280 mm | D ₁₀ = N/A |
| C _u = N/A | C _c = N/A |

| Classification | |
|----------------|---------------------------|
| ASTM | Sandy organic clay (OH) |
| AASHTO | Clayey Soils (A-7-6 (25)) |

| Sample / Test Description | |
|----------------------------|-------|
| Sand/Gravel Particle Shape | : --- |
| Sand/Gravel Hardness | : --- |